

## CLAIMS

1. (Previously Presented) A method for reducing image noise in a scanned image, comprising:
  - decreasing a color level of the scanned image by reducing a number of bits of a full color level of one or more pixels in the scanned image to form a reduced color level image;
  - composing a pattern having less color level than the full color level; and
  - recombining the full color level of the one or more pixels in the scanned image by combining the reduced color level image with the pattern.
2. (Previously Presented) The method of claim 1, wherein the reduced color level image and the pattern are combined using a bit-enhanced method.
3. (Previously Presented) The method of claim 1, wherein combining the reduced color level image with the pattern restores the one or more pixels to include a same number of bits as before the color level was decreased.
4. (Previously Presented) The method of claim 1, wherein the pattern comprises a halftone pattern.
5. (Previously Presented) The method of claim 1, wherein the number of bits reduced from the full color level is set to an image noise level.
6. (Previously Presented) A method for reducing noise in an image, comprising:
  - reducing an image level of one or more pixels of the image by subtracting a number of bits of image data from each of the one or more pixels; and
  - restoring the image level of the one or more pixels using a halftone pattern comprising a matrix, wherein a number of rows and a number of columns of the matrix correspond to the number of bits of image data subtracted from the one or more pixels.

7. (Previously Presented) The method of claim 1, wherein the color level of the pattern depends on the number of bits reduced from the full color level.

8. (Previously Presented) A method for reducing noise in an image, comprising:  
reducing a full image level of one or more pixels in the image by decreasing a number of bits according to the image noise;  
composing a halftone pattern with a reduced image level corresponding to the decreased number of bits; and  
recombining an image level of the one or more pixels in the image using the halftone pattern.

9. (Previously Presented) The method of claim 8, wherein a number of bits in the recombined image level is the same as a number of bits in the full image level.

10. (Previously Presented) The method of claim 8, wherein the halftone pattern comprises a matrix having a number of rows equal to the decreased number of bits.

11. (Previously Presented) The method of claim 10, wherein the matrix further comprises a number of columns equal to the decreased number of bits.

12. (Previously Presented) The method of claim 8 further comprising displaying the image including the recombined image level on a computer monitor.

13. (Previously Presented) The method of claim 8, further comprising filling out missing codes of the one or more pixels of the image using a bit-enhanced method.

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18. (Previously Presented) An apparatus for reducing noise in an image, comprising:  
means for reducing a full image level of one or more pixels in the image by decreasing a number of bits according to the image noise;

means for composing a halftone pattern with a reduced image level corresponding to the decreased number of bits; and

means for recombining an image level of the one or more pixels in the image using the halftone pattern.

19. (Previously Presented) The apparatus of claim 18, wherein a number of bits in the recombined image level is the same as a number of bits in the full image level.

20. (Previously Presented) The apparatus of claim 18, wherein the halftone pattern comprises a matrix having a number of rows and columns equal to the decreased number of bits.

21. (Previously Presented) The apparatus of claim 18, wherein recombining the image level restores the one or more pixels to include a same number of bits as before the full image level was reduced.

22. (Previously Presented) The apparatus of claim 18, wherein the number of bits decreased from the full image level is set to an image noise level.

23. (Previously Presented) The apparatus of claim 18, wherein the reduced image level of the pattern depends on the number of bits reduced from the full image level.

24. (Previously Presented) The apparatus of claim 18, wherein one or more of the full image level, the reduced image level, and the image level comprise a color level.

25. (Previously Presented) The apparatus of claim 18, wherein one or more of the full image level, the reduced image level, and the image level comprise a gray level.